FEB 2 2 2005 SHEET TO SEADEN AND SHEET TO SEAD

SUBSTITUTE SEQUENCE LISTING

10> Menashe, Bar-Eli Green, Larry L.

<120> USE OF ANTIBODIES AGAINST THE MUC18 ANTIGEN

<130> ABGENIX.030C1

<140> 10/660,357

<141> 2003-09-10

<150> 10/330,580

<151> 2002-12-26

<150> 60/346,460

<151> 2001-12-28

<160> 90

<170> FastSEQ for Windows Version 4.0

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<212> PRT

<213> Homo Sapiens

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Gly Tyr Ile Tyr Tyr Thr Trp Thr Ser Asn Tyr Asn Pro Ser Leu Lys 50 55 60

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu 65 70 75 80

Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala 85 90 95

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Gln Gly Thr Met Val Thr Val Ser Ser 115 120

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Pro His Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
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Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
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ccagggaagg gactggagtg gattggctat atctattaca cttggacctc caactacaac 180
ccctccctca agagtcgcgt caccatatca gtggacacgt ccaaaaacca gttctccctg 240
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Thr Tyr His Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu
        35
                            40
                                                 45
Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
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Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
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Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
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Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
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Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Arg
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cagcacccag ggaagggcct ggagtggatt gggtacatct attacagtgg gagcacctac 180
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ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
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364

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caqcacccag ggaagggcct ggagtggatt gggttcatct attacagtgg gagcacctac 180
tacaacccgt ccctcaagag tcgagttacc atatcagtag acacgtctaa gaaccagttc 240
tccctgaagc tgagctctgt gactgccgcg gacacggccg tgtattactg tgcgagagag 300
ggagatgget ttgactactg gggccaggga accetggtca ccgtctcctc ag
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<212> DNA
<213> Homo Sapiens
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gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
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Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
Gly Tyr Ile Tyr Tyr Thr Trp Thr Ser Asn Tyr Asn Pro Ser Leu Lys
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Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
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                                         75
Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
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Arg Asp Gln Gly Gln Trp Leu Leu Pro Asp Ala Phe Asp Ile Trp Gly
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Gln Gly Thr Met Val Thr Val Ser Ser
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Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
                        55
                                             60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
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Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Trp
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Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
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ccagggaagg gactggagtg gattggctat atctattaca cttggacctc caactacaac 180
ccctccctca agagtcgcgt caccatatca gtggacacgt ccaagaacca gttctccctg 240
aggetgagtt etgtgaeege tgeggaeaeg geegtttaet aetgtgegag agateagggg 300
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gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagag ttcactctca caatcagcag cctgcagcct 240
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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Phe Ser Tyr
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Gly Phe Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Leu
        35
                            40
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Gly Trp Ile Ser Ala Tyr Asn Gly Asn Thr Asn Tyr Ala Gln Lys Leu Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr 70 75 Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 Ala Arg Glu Thr Lys Val Arg Gly Val His Tyr Tyr Gly Met Asp Val 105 Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser 115 120 <210> 22 <211> 113 <212> PRT <213> Homo Sapiens <400> 22 Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly 10 Glu Arg Ala Thr Ile Ile Cys Lys Ser Ser Gln Ser Ile Leu Tyr Ser 20 25 Ser Asn Asn Lys Asn Tyr Leu Gly Trp Tyr Gln Gln Lys Pro Gly Gln 40 45 Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val 55 Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr 70 75 Ile Asn Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Tyr Tyr Ser Thr Pro Arg Ser Phe Gly Gln Gly Thr Met Val Glu Ile 105 Lys <210> 23 <211> 370 <212> DNA <213> Homo Sapiens <400> 23 caggttcagc tggtgcagtc gggagctgag gtgaagaagc ctgggggcctc agtgaagqtc 60 teetgeaagg ettetggtta eacetttttt agetatggtt teagetgggt gegacaggee 120 cctggacaag ggcttgagtg gctgggatgg atcagcgctt acaatggtaa cacaaactat 180 gcacagaagc tccagggcag agtcaccatg accacagaca cttccacgag cacagcctac 240 atggagctga ggagcctgag atctgacgac acggccgtgt attactgtgc gagagaaact 300 aaggttcggg gagtccacta ctacggtatg gacgtctggg gccaagggac cacggtcacc 360 gtctcctcag 370 <210> 24 <211> 340 <212> DNA <213> Homo Sapiens <400> 24 gacategtga tgacceagte tecagactee etggetgtgt etetgggega gagggeeace 60

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Gly Cys Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu
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Trp Ile Gly Tyr Ile Tyr Ser Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
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Leu Lys Ser Arg Ile Thr Leu Ser Val Asp Thr Ser Lys Asn Gln Phe
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                                        75
Ser Leu Lys Leu Asn Ser Met Thr Ala Ala Asp Thr Ala Val Tyr Tyr
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Cys Ala Arg Asp Arg Glu Thr Ala Gly Phe Asp Tyr Trp Gly Gln Gly
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Thr Leu Val Thr Val Ser Ser
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Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
Tyr Asp Ala Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Gly Leu Gln Pro
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tacaacccgt ccctcaagag tcgaattacc ttatcagtag acacgtctaa gaaccagttc 240
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gggaaagccc ctaagctcct gatctacgat gcatccaatt tggaaacagg ggtcccatca 180
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Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
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Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
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Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
                    70
                                        75
                                                             80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
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Ala Arg Ser Ile Phe Gly Val Val Ile Asp Tyr Gly Met Asp Val Trp
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Gly Gln Gly Thr Thr Val Thr Val
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Leu Ala Trp Tyr Gln Gln Asn Pro Gly Lys Val Pro Lys Leu Leu Ile
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Thr Tyr His Trp Ser Trp Ile Arg Gln His Pro Gly Arg Gly Leu Glu
Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Tyr His Asn Pro Ser
Leu Lys Ser Arg Ile Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
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Cys Ala Arg Gly Gly Asp Gly Tyr Arg Tyr Trp Gly Gln Gly Thr Leu
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Phe Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
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Phe Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
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Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
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Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Arg
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cagcacccag ggaggggcct ggagtggatt ggatacatct attacagtgg gagcacctac 180
cacaacccgt ccctcaagag tcgaattacc atatcagtag acacgtctaa gaaccagttc 240
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ggagatggct acagatactg gggccaggga accetggtca ecgteteete ag
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gaagattttg cagtttatta ctgtcagcag tataataact ggcctcggac gttcggccaa 300
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<213> Homo Sapiens
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<400> 37 Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Thr Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile 40 Gly Tyr Ile Tyr Tyr Thr Gly Asn Thr Tyr Tyr Asn Pro Ser Leu Lys 55 Ser Arg Val Thr Val Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu 70 75 Lys Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala 90 Arg Asp Pro Gly Gln Trp Leu Val Pro Asp Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Ser Val Ser Ser 115 <210> 38 <211> 112 <212> PRT <213> Homo Sapiens <400> 38 Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Ile Pro Gly 10 Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Gln Ser Asn Gly Asn Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser 40 Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro 55 Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile 70 Ser Arg Val Glu Ala Asp Asp Val Gly Ile Tyr Tyr Cys Met Gln Ala 90 Leu Gln Ile Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys <210> 39 <211> 364 <212> DNA <213> Homo Sapiens <400> 39 caggtgcagc tgcaggagtc gggcccagga ctggtgaagc cctcggagac cctgtccctc 60 acctgcactg tetetggtgg etecateagt acttactact ggagttggat eeggeageee 120 ccagggaagg gactggagtg gattggatac atctattaca ctgggaacac ctactacaac 180 ccctccctca agagtcgagt caccgtttca gttgacacgt ccaagaacca gttctccctg 240 aagetgaact etgtgacege tgeggacaeg geegtgtatt aetgtgegag agateeagge 300 cagtggctgg tecetgatge ttttgatate tggggecaag ggacaatggt etceqtetet 360 tcaq 364 <210> 40

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tacctgcaga agccagggca gtctccacag ctcctgatct atttgggttc taatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
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ctcactttcg gcggagggac caaggtggag atcaaac
<210> 41
<211> 97
<212> PRT
<213> Homo sapiens
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Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Tyr
Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
                            40
Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
                        55
Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
                    70
                                        75
Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                                    90
Arg
<210> 42
<211> 96
<212> PRT
<213> Homo sapiens
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Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Tyr
Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
Gly Tyr Ile Tyr Tyr Ser Ser Thr Asn Tyr Asn Pro Ser Leu Lys Ser
                        55
Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu Lys
                    70
Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Leu Tyr Tyr Cys Ala Arg
                                    90
<210> 43
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<213> Homo sapiens

<210> 44

<211> 93 <212> PRT

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Cys Ala Arg

<210> 47 <211> 95 <212> PRT <213> Homo sapiens

<400> 47

 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly 1
 5
 10
 15
 15

 Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp 20
 25
 30
 30

 Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile 35
 40
 45

 Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly 50
 55
 60

 Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro 65
 70
 75

 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro

<210> 48 <211> 95 <212> PRT <213> Homo sapiens

<400> 48

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Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro
85 90 95

<210> 49

<211> 97

<212> PRT

<213> Homo sapiens

<400> 49

Arg

<210> 50

<211> 96

<212> PRT

<213> Homo sapiens

<400> 50

<210> 51

<211> 95

<212> PRT

<213> Homo sapiens

<400> 51

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly

1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp

20 25 30

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro 85 90 95

<210> 53 <211> 98 <212> PRT <213> Homo sapiens

65 70 75 80

Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg

<210> 54 <211> 96 <212> PRT <213> Homo sapiens

<400> 54 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Tyr Gly Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Leu Gly Trp Ile Ser Ala Tyr Asn Gly Asn Thr Asn Tyr Ala Gln Lys Leu Gln Gly 55 Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys Ala Arg 90

<210> 55 <211> 101 <212> PRT <213> Homo sapiens

<400> 55 Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr 75 Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln

Tyr Tyr Ser Thr Pro 100

<210> 56 <211> 98 <212> PRT <213> Homo sapiens

Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Cys Lys Ser Ser Gln Ser Ile Leu Tyr Ser Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro 55 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser 70 Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Tyr Tyr Ser 90

Thr Pro

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<211> 99
<212> PRT
<213> Homo sapiens
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Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
                                    10
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly
Gly Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu
Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
                        55
Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
                    70
Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
Cys Ala Arg
<210> 58
<211> 95
<212> PRT
<213> Homo sapiens
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Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Gly Gly
                                25
Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu Trp Ile
                            40
Gly Tyr Ile Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser Leu Lys Ser
                        55
Arg Ile Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu Lys
Leu Ser Met Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg
<210> 59
<211> 95
<212> PRT
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Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
                                    10
Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Asp Ile Ser Asn Tyr
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
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<213> Homo sapiens

<400> 60

 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly 1
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 10
 15

 Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Asp Ile Asn Tyr Leu 20
 25
 30

 Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr 35
 40
 45

 Asp Ala Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly Ser 50
 55
 60

 Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Leu Gln Pro Glu Asp 65
 70
 75
 80

 Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Asp Leu Pro

<210> 61 <211> 98 <212> PRT <213> Homo sapiens

<400> 61

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg

<210> 62 <211> 98 <212> PRT <213> Homo sapiens

<400> 62 Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg

<210> 63 <211> 95

<212> PRT

<213> Homo sapiens

<400> 63

<210> 64 <211> 91 <212> PRT <213> Homo sapiens

<400> 64

<210> 65 <211> 99

<212> PRT

<213> Homo sapiens

<400> 65

Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln

1 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly 20 25 30

Gly Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu 35 40 45

Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser 50 60

Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe 65 70 75 80

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr 85 90 95

Cys Ala Arg

<210> 66

<211> 95

<212> PRT

<213> Homo sapiens

<400> 66

Gln Val Gln Leu Ser Gly Pro Gly Leu Val Lys Pro Ser Thr Leu Ser
1 5 10 15

Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly Tyr His Trp
20 25 30

Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu Trp Ile Gly Tyr 35 40 45

Ile Tyr Tyr Ser Gly Ser Thr Tyr His Asn Pro Ser Leu Lys Ser Arg
50 55 60

Ile Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu Lys Leu 65 70 75 80

Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg 85 90 95

<210> 67

<211> 107

<212> PRT

<213> Homo sapiens

<400> 67

Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly

1 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Asn Asn 20 25 30

Phe Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile 35 40 45

Phe Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly 50 55 60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser 65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Arq

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85 90 95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105
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<210> 68 <211> 93 <212> PRT <213> Homo sapiens

<400> 68

<210> 69 <211> 97 <212> PRT <213> Homo sapiens

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Tyr 20 25 30 Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile

35 40 45
Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu 65 70 75 80 Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala

Lys Leu Ser Ser val inr Ala Ala Asp inr Ala val iyr iyr Cys A. 85 90 95

Arg

<210> 70 <211> 94 <212> PRT <213> Homo sapiens

toros momo paprema

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile 35 40 45

Gly Tyr Ile Tyr Tyr Ser Gly Thr Tyr Asn Pro Ser Leu Lys Ser Arg 50 55 60

Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu Lys Leu 65 70 75 80

Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg 85 90

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Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Asn Ala
            20
                                25
Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Phe Gly
Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly
                        55
Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser Glu Asp
Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro
                85
<210> 77
<211> 99
<212> PRT
<213> Homo sapiens
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Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly
Gly Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu
Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
                    70
Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
                                    90
Cys Ala Arg
<210> 78
<211> 98
<212> PRT
<213> Homo sapiens
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly
            20
                                25
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Tyr His Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu Trp

Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser Leu

Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser

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Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys
Ala Arg
<210> 79
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<213> Homo sapiens
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Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
                        55
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
                    70
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro
                                    90
<210> 80
<211> 105
<212> PRT
<213> Homo sapiens
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Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Asn Leu
Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
                            40
Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly Ser
Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser Glu
Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Trp Gly
                                    90
Gln Gly Thr Leu Val Thr Val Ser Ser
            100
<210> 81
<211> 106
<212> PRT
<213> Homo sapiens
<400> 81
Gln Val Gln Leu Glu Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
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Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly Thr Tyr His Trp Ser Trp Ile Arg Gln His Pro Gly Arg Gly Leu Glu 40 Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Tyr His Asn Pro Ser Leu Lys Ser Arg Ile Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe 70 Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr 90 85 Cys Ala Arg Gly Gly Asp Gly Tyr Arg Tyr 100 <210> 82 <211> 95 <212> PRT <213> Homo sapiens <400> 82 Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly 10 Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn 20 25 Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro 90 <210> 83 <211> 33 <212> DNA <213> Artificial Sequence <223> Synthetic oligonucleotide primer sequence <400> 83 atattacgaa ttcacttgcg tctcgccctc cgg 33 <210> 84 <211> 34 <212> DNA <213> Artificial Sequence <223> Synthetic oligonucleotide primer sequence <400> 84 cagcttagag ctagccggct ctccggctcc ggca 34

<210> 85

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<210> 89		
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<400> 89		
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gagacggcca	caa	13
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<210> 90		
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